

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
SAN ANTONIO DIVISION**

WAVE NEUROSCIENCE, INC.,

Plaintiff,

vs.

Civil Action No. 5:23-cv-00626-XR

BRAIN FREQUENCY LLC,

Defendant.

Demand for Jury Trial

**DEFENDANT'S NOTICE OF
ORDER ON INVALIDITY OF PLAINTIFF'S RELATED PATENTS (S.D. Cal.)**

Defendant Brain Frequency LLC (“Brain”) hereby files this notice to inform the Court of a recent and relevant ruling regarding Plaintiff Wave Neuroscience, Inc.’s (“Wave’s”) asserted patents in a separate lawsuit pending in the Southern District of California and would respectfully notify the Court as follows:

At this Court’s pre-*Markman* hearing on October 2, 2024, the Court requested submission of any relevant information pertaining to Plaintiff Wave’s patent infringement lawsuits in other jurisdictions. In addition to this instant lawsuit, Wave has another patent infringement lawsuit in California styled: *Wave Neuroscience, Inc. v. Peaklogic, Inc. and Keven T. Murphy M.D.*, Case No. 2-cv-1330-CAB-SBC; in the United States District Court for the Southern District of California (the “*Peaklogic*” matter). In that matter, Defendant moved for summary judgment asserting that Wave’s asserted patents were invalid under 35 U.S.C. § 101 (patentability). Brain has learned that on October 7, 2024, the *Peaklogic* Court issued an order invalidating the asserted claims of two of the three patents Wave asserted. *See Exhibit A*, Order on Motion for Summary Judgment of Invalidity (“Order”).

In the *Peaklogic* matter, Wave asserted three patents: Patents Nos. 8,475,354 (’354 patent); 8,480,554 (’554 patent); and 9,446,259 (’259 patent). *See Exhibits B-D*. Wave’s patents involve the same patented technology (*i.e.* TMS) as the patents asserted in this instant lawsuit. One of the patents, the ’554 Patent, is in the same family as—and is the direct parent of—U.S. Patent 8,926,490 (“the ’490 Patent”) asserted in this instant lawsuit and has very similar claims. The other two patents—the ’354 Patent and the ’259 Patent—also have substantially similar limitations as the asserted claims in this matter. The *Peaklogic* Court’s analysis as to invalidity is directly related to the claim construction arguments in this instant dispute.

By way of example the following illustrates the similarities between independent claim 1 of the '554 Patent (S.D. Cal.) found to be invalid and independent claim 2 of the '737 Patent (W.D. Tex.) asserted in this matter:

'554 Patent (S.D. Cal.)	'737 Patent (W.D. Tex.)
<p>Claim 1. A method for treating depression in a subject having an intrinsic frequency in a specified EEG band, comprising:</p> <p>(a) adjusting output of a magnetic field based on the subject's intrinsic frequency;</p> <p>(b) applying said magnetic field close to a head of the subject; and</p> <p>(c) moving the intrinsic frequency toward a pre-selected intrinsic frequency within the specified EEG band.</p>	<p>Claim 2. A method comprising:</p> <p>(a) adjusting output of a magnetic field;</p> <p>(b) applying said magnetic field close to a head of a Subject; and,</p> <p>(c) moving, using the magnetic field, an intrinsic frequency of a specified EEG band of the subject toward a preselected intrinsic frequency of the specified EEG band,</p> <p>wherein the pre-selected intrinsic frequency is a frequency that decreases blood flow in the lower region in the brain of a subject.</p>

In invalidating the patent claims, the *Peaklogic* Court explained:

As a method to treat depression, the claims include no limitations in terms of *how to move* the intrinsic frequency or phase such that it will treat a subject's depression. These claims instruct at a very high level the application of an external magnetic field to the head of the subject of a frequency or phase different than the patient's intrinsic frequency or phase to move that intrinsic frequency or phase. *There is no limitation or specifics regarding the selection of a target frequency or phase, or the placement of the magnetic field other than "close to the head of the subject"* such that it will treat depression. The Court finds these claimed methods describe nothing more than the natural phenomenon that *a brain's intrinsic frequency can be altered by external stimuli and provide no significant instruction regarding how it can be implemented to treat a patient with depression.*

Order at 7-8 (emphasis added). The *Peaklogic* Court found that "[t]he claims are overly broad, and the Court finds they claim ineligible subject matter and are invalid. *Id.* at 8. The Order in this regard is instructive to the arguments advanced by the parties' claim construction positions in this instant matter. Additionally, given the *Peaklogic* Court's Order on invalidity, Brain believes that the asserted claims in this matter are also invalid as unpatentable subject matter for the same reasons and anticipates seeking similar relief.

Attached as **Exhibit E** is the *Peaklogic* Court's claim construction order. The claim construction order was entered on November 10, 2022, prior to its Order on invalidity.

Dated: October 25, 2024

Respectfully submitted,

/s/ John D. Saba

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**ATTORNEYS FOR BRAIN FREQUENCY
LLC**

CERTIFICATE OF SERVICE

This to certify that on this the 25th day of October 2024, a true and correct copy of the foregoing has been served upon counsel of record via authorized electronic service.

/s/ John Saba

John D. Saba, Jr.